COMMERCIAL LOGISTICS APPLICATIONS SYSTEM (CLAS)

A Redirected Program to Accomplish the Original Objectives of the

Logistics Integrated Management System (LIMS)

C L A S

What is it, and why do we need it?

Existing Situation

- Slow Response to Customer Requirements
- Labor Intensive
  - -- Error-prone Multiple Data Entry
  - -- Paper Volume
- Autonomous Data Base
- Marginal Management Information
- Difficult to Maintain and Enhance Software

GOALS

Develop System that:

- ° Responds to customer service requirements
- ° Supports and integrates logistical operations
- ° Enhances efficiency and effectiveness
- ° Provides timely and useful management information
- ° Adapts to changing requirements
- ° Interfaces to agency financial systems and processes

SCOPE

The system will address:

- ° Cataloging
- ° Requisitioning
- ° Procurement
- ° Receiving
- ° Inventory management
- ° Distribution
- ° Vendor payment
- ° Financial interfaces
- ° Management information

WHERE WE'VE BEEN

1978 -- Shortfalls of existing systems documented

1980 -- LIMS program formally established

1982 -- Quality Assurance (QA) contract awarded

1983 -- Development contract awarded

- 13 Work Packages (WP) identified
- Sequenced delivery of WPs beginning Jan 85 through Aug 91.

April 1985 -- Decision to terminate development and QA contracts

- Lack of progress
- Cost growth
- Change in Database Management System and New Terminal Selection
  - -- Loss of support for GIMS
  - -- Opportunity to use Packaged Software

August 1985 -- Initial study of commercial packages completed

- Management Science American (MSA) best functional fit
- Redirection designated "CLAS"

January 1986 -- Further Evaluation of MSA software endorsed

- Technical evaluation of interface between MSA and Cullinet applications packages
- Concurrent Functional evaluation

C L A S

Management Science America

Company Statistics

- Largest Independent Software Developer in World
- Headquartered Atlanta, Georgia
- $140 million annual sales
- 1700 employees
- 17 years in business
- 10,000 packages installed
- Marketing focus on manufacturing and not-for-profit institutions

Software Compatibility

- Functions without Database Management System (DBMS) or with three largest DBMS, including Cullinet
- Until 1983, MSA was vendor of choice for Cullinet IDMS
- No known instances of interfacing MSA and Cullinet applications software
- Majority of users have implemented MSA software with little or no modification

MSA Users

FBI
HUD
Federal Prison Industries
Washington Metropolitan Transit Authority (METRO)
George Washington University
Dupont
Black & Decker
TRW Industrial Products
Rockwell Industries

WHERE WE ARE TODAY

OL/OIT/OF agree that further evaluation is desirable and necessary

Evaluation to be conducted over next six months at unclassified site outside Agency premises

- Agency lacks expertise to evaluate without hands-on experience
- OIT lacks hardware/software environment until summer 1986
- TRW will provide facilities:
  - -- Office space
  - -- Computer facilities configured to what OIT will have in summer 1986
  - -- Cullinet IDMS/R
  - -- Estimated cost $250K
- TRW will provide technical support
  - -- Augment OIT technical evaluation team
  - -- Serve as database administrator
  - -- Estimated cost $150K
- MSA software purchased January 86
  - -- Supports supply, procurement, and payment functions
  - -- Cost is $300K
- Agency owned Cullinet General Ledger package will be installed at TRW site
- Target start date is mid-February 1986

PROGRAM ORGANIZATION

During initial evaluation phase, program will be organized as two independent, coordinated efforts.

OL will manage the functional evaluation process

° Three evaluation teams focusing on process

-- Inventory/Requisitioning/Distribution
-- Procurement
-- Vendors/ Payment/Financial Interface

° Each team comprised of

-- Three functional specialists
-- Policy Consultant (GS-15, parttime)
-- Data Processing Support (as needed)

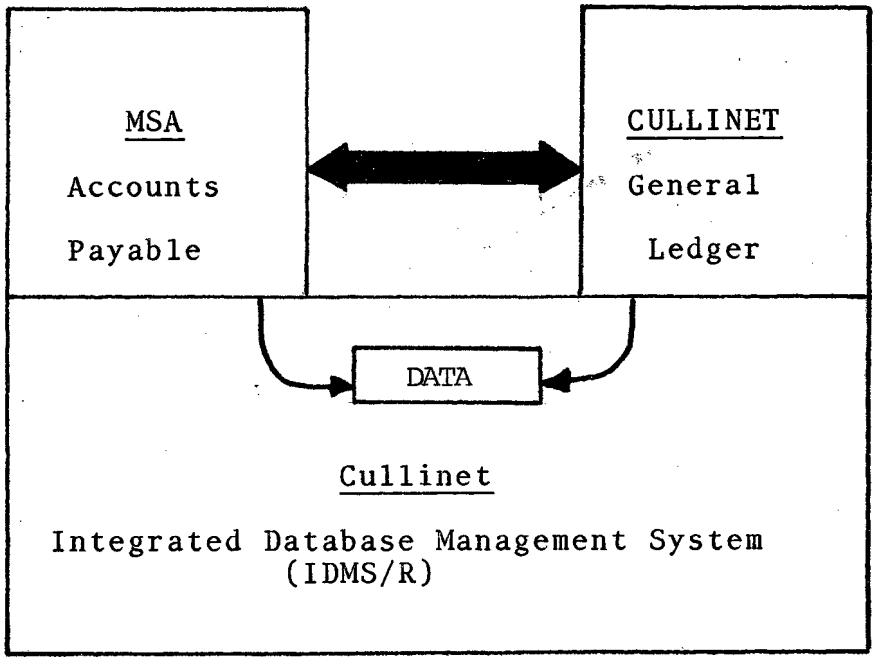
° Separate exploitation team

-- Develop techniques to utilize data
-- Query and reports capabilities
-- Identify candidate requirements that appropriately can/should be done in local PC mode
-- Facilitate upload/download techniques
-- PC as a productivity tool

OIT will manage technical evaluation process

° Two analysts assigned to program
° Two analysts on loan from Corporate Data Program
° TRW contractors to augment staff

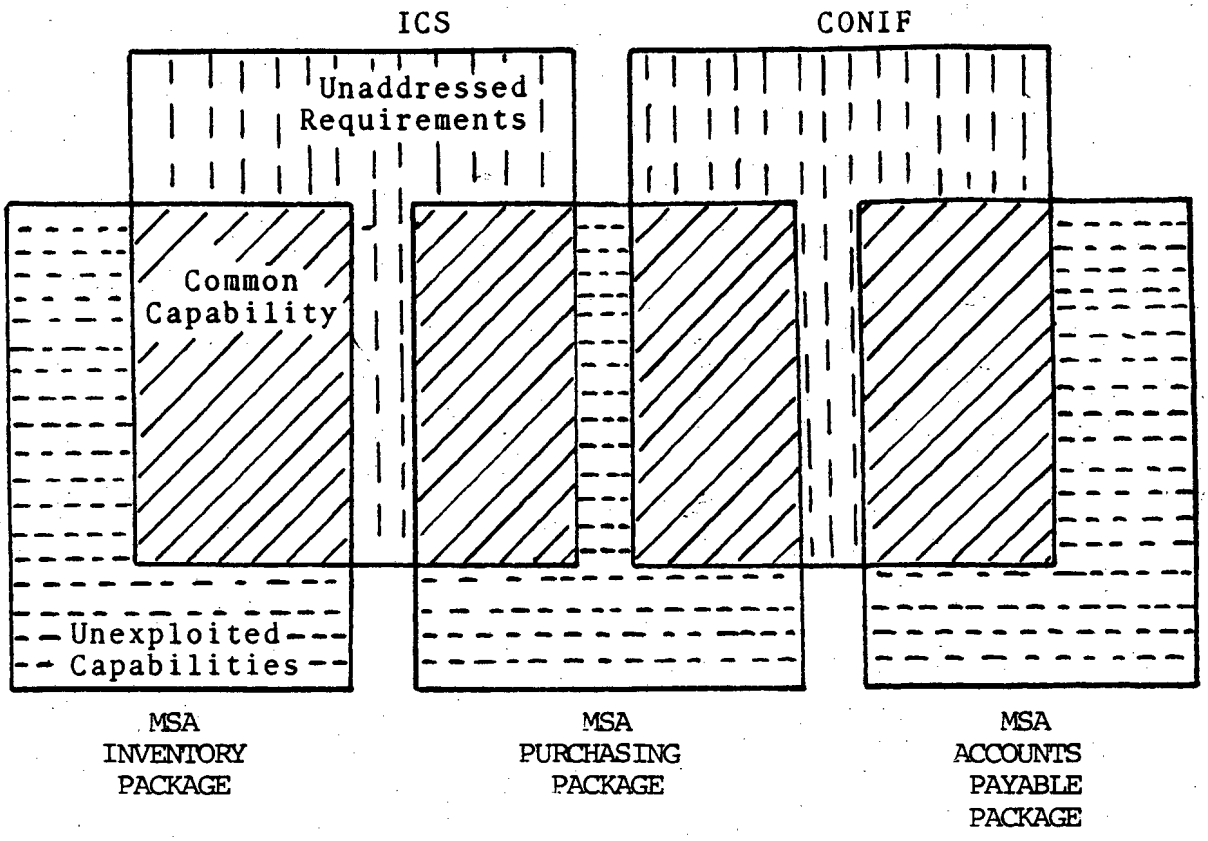
TECHNICAL EVALUATION APPROACH



- DETERMINE DEGREE OF DIFFICULTY IN INTERFACING ONE MSA PACKAGE AND ONE CULLINET PACKAGE

- IF INTERFACE IS PROHIBITIVE, THEN OIT WILL RECOMMEND ALL-CULLINET SYSTEM

FUNCTIONAL EVALUATION APPROACH



- DETERMINE DEGREE TO WHICH PACKAGES MATCH CURRENT REQUIREMENTS, USING MODELING TECHNIQUES
- IDENTIFY UNEXPLOITED PACKAGE CAPABILITIES
- IDENTIFY REMAINING REQUIREMENTS AS BEING
  - FIRM
  - FLEXIBLE
  - DEFERABLE

WHERE WE ARE GOING

(TENTATIVE, AND ASSUMING EVALUATIONS ARE POSITIVE)

Phase I -- Feb - Jun 86	° Evaluations ° Reassess Schedule
Phase II -- Aug - Feb 87	° Use flexible approach to adapt requirements to fit package capabilities ° Identify firm requirements requiring augmentation of package ° Identify firm requirements requiring modification of package ° Augment and modify packages using staff and contractor support ° Complete production model
Phase III -- Mar - Sep 87	° Identify interface requirements to financial systems ° Develop interfaces ° Test and tune production model ° Parallel operations ° Conversion planning ° Training
Oct 87	PRODUCTION

C L A S

BUDGET REQUIREMENTS
(thousands of dollars)

FY 1986

Purchase Software	400
Vendor Support Package	100
Time Share Services	468
Travel/Training-Project Team	100
Total	1068

FY 1987

Maintenance/Licensing	100
Software Modification	606
Training Program-Users	200
Travel/Training-Users Team	100
Equipment-3270 Terminals	200
Total	1206

FY 1988

Maintenance/Licensing	100
Acquisition-New Packages	200
Enhancements-Software Modification	250
Equipment	450
Total	1000

FY 1989

O&M plus Equipment	1000

FY 1990

O&M plus Equipment	1000

FY 1991

O&M	550

C L A S vs LIMS

PROGRAM BUDGET

	86	87	88	89	90	91	Total
LIMS	2468	2472	2652	2953	2283	503	13,331*
CLAS	1068	1206	1000	900	900	550	5,624
SAVINGS	1400	1266	1652	2053	1383	(47)	7,707

* LIMS Budget FY 82 - FY 85 Totaled $5846

LIMS Budget FY 82 - FY 91 Totaled $19,177

STEPS TAKEN TO ENHANCE PROSPECTS FOR THE PROGRAM

Using Packaged Software

- ° Provides a standard for evaluating requirements
- ° Permits management to focus on functional issues instead of software development
- ° Cheaper to buy bulk of software than to develop it

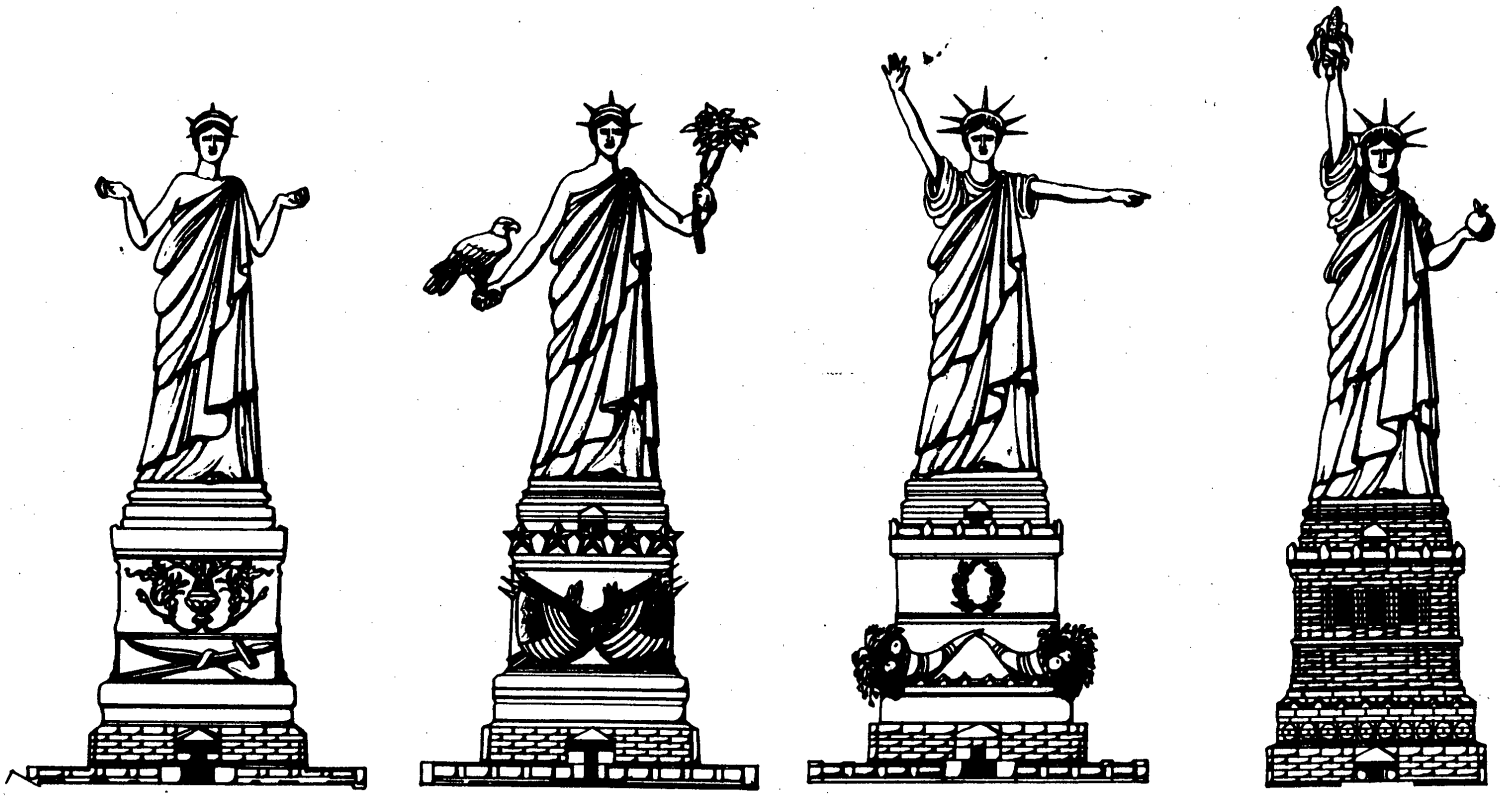
Using an Iterative Modeling/Prototyping Approach to Defining Requirements

- ° Quick turnaround
  - -- IDENTIFY NEED, MODEL, EVALUATE, REFINE or APPROVE REQUIREMENT
- ° Steers away from pre-specification

Adapt to the Package

- ° Minimize modifications
  - -- Avoid current development, reduce maintenance
- ° Adopt flexible posture towards requirements

Govern Program by Top-Down Policy Considerations



ITERATIVE DEVELOPMENT